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Why Did Airline Deregulation Produce Today's Industry Structure?

Should Our Lawmakers Have Predicted How the Industry Would Emerge?

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The commercial airline industry of the United States has undergone tremendous changes since it was deregulated in 1978. Allowed to operate in a more open and competitive environment, airline management reacted quickly (and sometimes ingeniously) to maintain and expand their market share. The results over the past 15 years have been disastrous for all but a few airlines.

Many of the airlines' initiatives and innovations produced results that were totally unforeseen by the government. This paper discusses how airline deregulation has produced today's industry structure and shows how our lawmakers failed to correctly predict results of their actions.

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I. INTRODUCTION

The airline industry in the United States has undergone dramatic changes since it was first deregulated. Today's industry and markets do not resemble the ones promised by the early proponents of deregulation, surprising even its most ardent supporters.[1] While Department of Transportation studies claim that air travellers have received more service at lower cost,[2] critics argue that deregulation is the major cause of the industry's disintegration and unprecedented concentration.[3] There have been over 150 bankruptcies and 50 mergers in the industry since they were first deregulated in 1978.[4] Of the twelve major airlines flying just two years ago, half have since entered into bankruptcy or various stages of liquidation. The industry today is dominated by three "mega" carriers; American, Delta and United, which control nearly 59 percent of the market, versus 38 percent in 1979.[5] This has lead Arizona Senator McCain to call the airline market "a deregulated monopoly." Of the fourteen airlines that began operation since 1978, only one is still flying.[6] An industry expert recently proclaimed "The unprecedented wave of mergers, acquisitions and consolidations unleashed since deregulation has created an oligopoly...."[7]

The U.S. airlines are deeply in debt. Beginning with deregulation in 1978, through the mid-eighties, industry losses were in the billions. Today, the situation has worsened, where 1993 is expected to be the fourth consecutive year of operating losses whose current down cycle could approach eight billion dollars. These unprecedented losses are far greater than profits earned in the entire 67 year history of scheduled airline service.[8]

As the airlines have been suffering through the most difficult period in its history, so too have their employees, with over 150 thousand discharged since 1988.[9]

Department of Transportation statistics provide yet additional evidence of an industry in trouble. In a study released in February 1990, they claim there were 40,985 passenger complaints in 1987, compared to 7,362 in 1983. The quality of service has deteriorated and customers are experiencing more delayed flights, congested facilities, over-bookings, missed connections, "bumping," lost baggage, cancellations and poor food.[10]

Did Congress expect these developments to occur in the airline industry when they deregulated it? It hardly seems likely that, had our government known what was to eventually occur, it would have proceeded as it did. So then, the primary issue addressed in this paper is not to determine why the airlines were deregulated, rather -- **why didn't our lawmakers correctly predict the results of**

their actions? Stated a bit differently -- **what did they fail to consider** before passing legislation that in essence, removed practically all regulatory controls from the airline industry?

II. BACKGROUND

A. The Need for Economic Regulation

Following the passage of strict legislation regulating the motor carrier and railroad industries in the early 1930's, the U.S. government brought the fledgling airline industry under strict operating and economic regulation. Seeing an industry suffering from over-capacity, soaring accident rates, and increasing bankruptcy, the government passed the Civil Aeronautics Act of 1938 to secure the industry a future. This act formed the basis for the Civil Aeronautics Board's policies and authority until passage of the Airline Deregulation Act of 1978.

Formed with several objectives, some with conflicting natures, the CAB was chartered to not only regulate the air transportation system, but to be an advocate for promoting, encouraging and developing civil aeronautics. The CAB was to ensure competition to the extent necessary to cause the industry to grow, and at the same time prevent unjust or destructive competition. In the early years, the CAB regulated the industry on an individual airline basis. Subsidies and protectionist positions ensured the growth of

several major trunk lines. In the late 1960's and early 1970's the CAB regulated in a manner which was standardized throughout the industry based on cost characteristics, with a particular airline's needs assuming a very minor role. Cost control and cost minimization were dominant.

The reason for the CAB change was simple. The industry had grown too large for the CAB to micromanage without increasing the size of its bureaucracy beyond acceptable limits. In short, the CAB had achieved its 1938 goal of promoting the airline industry.

Regulation reached into almost every facet of the industry. Entry and exit restrictions were the most obvious controls which stymied competition on one hand yet ensured that quality service was extended to small communities as well as to large city-pairs. All mergers and acquisitions required approval of the CAB. Between 1938 and 1977, only six mergers were accomplished between trunk lines.[11] Several mergers were disapproved or withdrawn because they did not meet the stringent requirements needed to gain approval.

The issue of rate and fare control over the industry was the most controversial to consumers. The law required air carriers to establish "just and reasonable" rates and fares. However, the CAB determined for the 1970s that domestic trunk lines should earn a 12% rate of return based on a standard load factor of fifty-five

percent fill. Completely contrary to demand based economics, airlines often petitioned for higher rates even as their normal passenger load remained at less than 60 percent capacity. It was obvious to many, from both political parties, that regulatory reform was overdue. The regulations that had governed the industry since 1938 were out of date. Most of the air carrier trunk lines, however, disagreed.

B. Government Calls for Deregulation

During the 1960s and 1970s, the airlines were undergoing significant changes. Rising inflation, higher interest rates, lower demand, rising wages and spiralling fuel prices all combined to send shocks throughout the industry. With strict price controls and no entry freedom, providing additional capacity became the principal means of competition among airlines. As they purchased newer and larger aircraft, capacity soon exceeded demand. Load factors fell to an all-time low of 48 percent in 1971.[12] In response to airline petitions, the CAB approved dramatic price increases and enforced capacity restrictions, yet airline performance and economic efficiency failed to improve. It was not long before critics argued that the CAB's pricing and entry restrictions were the cause of excessive service, high prices and weak profits. They reasoned further that entry controls, carrier operating restrictions, and regulated fares reduced incentives for management to exercise

initiative, innovation and strive for efficiency.[13]

The newly appointed CAB chairman of the Carter administration, Alfred Kahn, also criticized regulation. He stated it "caused airfares to be considerably higher than they otherwise would be; resulted in a serious misallocation of resources; encouraged carrier inefficiency; denied consumers the range of price service options they would prefer; and created a chronic tendency toward excess capacity in the industry."[14]

The people favoring deregulation believed that no government involvement was necessary to assure a competitive environment since there would be no barriers to entry in a free market industry. In effect, they were saying that with entry into and exit from the industry being relatively easy and inexpensive, the market is highly contestable. They believed that should a monopolistic carrier charge higher than competitive prices and provide lower than competitive service, the threat of new entrants would soon force the established carrier to produce optimal service at a competitive price.

The benefits of deregulation were expected to be found through increased competition, leading to improved quality of services available to the public. It was assumed that carriers would profit as the price elasticity of the passenger market would ensure increased utilization of capacity, and empty seats

would be filled.[15]

While the move to deregulate the transportation industry had gained momentum, the final impetus to reform the airline industry regulations was the General Accounting Office (GAO) release of its report on the airline industry on February 23, 1977. In his message to Congress requesting regulatory reform, President Carter cited this report which concluded that regulation of domestic airlines had kept air travel costs up. The report went on to say that: (due to regulation)

- air fares were between 22 and 52% higher than they would otherwise be.
- between 1969 and 1974, airlines could have operated at a lower cost, saving travelers between 1.4 billion and 1.8 billion dollars annually.
- travelers' savings could have been even higher since lower fares would encourage greater travel.[16]

In his Message to Congress, President Carter specifically requested six objectives in regulatory reform:

(1) To the maximum extent possible, the domestic commercial airline industry should be governed by competitive market forces not governed by the decisions of a government bureaucracy.

(2) Ease the restrictions which prevent entry into the industry and into protected routes - so that new, innovative companies can offer their services to the public.

(3) Allow carriers to expand their routes, within limits, without approval from the CAB.

(4) Free carriers to set competitive prices (regulated only to prevent predatory - below costs pricing).

(5) Give carriers more flexibility to leave markets.

(6) Protect small communities against loss of needed air service.[17]

In retrospect, it seems that the government intended to deregulate the industry regardless of any testimony or evidence against deregulation. Those that predicted in their testimony that all would not be smooth were branded "nay-sayers," and perhaps their overstatement of expected chaos lessened their believability.

In his testimony before the House Subcommittee on Aviation, in April, 1977, Mr. John Robson, Chairman of the CAB, expressed the common arguments offered by opponents to deregulation to be "abandoned service, capital starvation, possible carrier failure, employee hardship, excessive industry concentration, and destruction of the U.S. air industry."[18] It was his opinion (and that of other CAB officials and Congressmen) that the "empirical evidence" supports the conclusion that excellent, attractively

priced, safe air transportation, which is profitable to the carrier, can be provided without tightly protective economic regulations.

Politicians and political economists were so convinced - and they controlled the future. Industry leaders were not convinced, but they were not listened to.

C. Industry Concerns Over Deregulation

During the Senate Deregulation hearings in 1977, practically all of the airlines were opposed to general deregulation. Industry labor organizations argued that cutthroat competition would ensue, reducing wages and benefits and cost many workers their jobs.[19] Worried about job security, airline employees lobbied Congress unsuccessfully for financial assurances in the event deregulation caused massive layoffs.

Even though some carriers (Frontier, Air West, Pan Am and later United) anticipated opportunities that might open with deregulation, the vast majority were opposed to deregulation. They argued that it would lead to chaos, drive many out of business and create less competition.[20]

Robert Crandall, later to become president of American Airlines, believed that deregulation needlessly risked

degradation of service, safety, and the integrated air transport network.[21] And in what has become a highly prophetic assessment of deregulation, Frank Lorenzo, the chairman of Texas International, stated that if deregulation of the airlines goes into effect, "we will, over a period of years, end up with a couple of very large airlines. There will be many small airlines that will start up here and there, but they will never amount to a very significant amount...The operating and financial advantage will go to the large carriers with substantial resources, and to very small carriers that temporarily have lower labor costs, primarily because they are non-unionized."[22]

It appears now that organized labor and industry executives more accurately predicted the consequences of deregulation than did those government advocates who prevailed at the time.

D. <u>The Airline Deregulation Act of 1978.</u>

The Airline Deregulation Act passed by Congress in 1978 reduced the economic regulation of commercial passenger service. It mandated maximum reliance on competition to promote the development of a variety of adequate economic, efficient and low-price services. Under deregulation, practically all entries would automatically be approved and fares could fluctuate to new ranges, high and low. Although not specifically mandated in the act, mergers would be approved with little trouble. Combined

with the freedom to determine their own routes, the airlines now possessed broad powers to operate as they wished, constrained only by market conditions, entrepreneurial skill and financial resources.[23] In effect, Congress desired that more reliance be placed on market forces and competition.

III. WHAT HAPPENED AND WHAT WENT WRONG WITH AIRLINE DEREGULATION

This section of the paper will discuss what actions or reactions the commercial airline industry took in their new, deregulated world. Each "action" will be followed by reasoning as to whether or not the government (Congress and CAB/DOT) should have been able to predict the action and what mistakes may have been made by the government which may have tended to worsen conditions for the industry.

A. Industry Reaction to Deregulation

While most of the airlines were unprepared for unrestricted competition, they quickly responded in a number of ways. They lowered fares to stimulate demand. Planes filled to capacity and profits took off. But then the market became glutted once new entrants came on board. Within two years of deregulation, the airlines were experiencing their worst losses ever; $280 million in 1980, followed by $450.8 million in 1981 and $733.4 million in 1982.

In large measure, these losses resulted from excess capacity and discounted fares. Prior to deregulation, carriers operated in a relatively stable market with limited competitors who tacitly developed schedules that kept load factors and profits high. But with the surge of new competition, capacity quickly out paced demand. The average load factor of the major airlines for the twelve months ending June 1980, was 60.4 percent, or 3 percentage points below their break-even point.[24] Because they operated for years in tightly regulated markets, the established airlines had little experience with the challenges they were now facing in this new era of pricing freedom. To attract new customers and fill empty seats, the airlines aggressively engaged in suicidal fare wars. It became increasingly difficult for the older and larger carriers to compete with the many new, low-cost, no-frills carriers entering the market that had lower operating expenses because of non-union labor, leased facilities, and depreciated, older aircraft. They put pressure on the major, established carriers, further diluting yields and load factors.

The heightened competition that ensued following deregulation was not entirely unexpected, though the wild discounting of fares surprised both the government and industry alike. The airlines were forced to adopt new strategies to try to control their hemorrhaging losses, strategies that most in government failed to consider before deregulation. Unchecked entrepreneurial creativity was combined with free market,

corporate realities to create a new industry structure. Management looked to increase efficiency, enhance productivity, improve allocation of resources while lowering costs. The established carriers dropped their least profitable routes, often to "thin" and smaller communities. They trimmed fuel expenses, reduced overhead, ridded their fleet of inefficient aircraft, restructured routes and lowered labor costs. These initial efforts were successful in reducing the airlines' costs per passenger-mile by about 30 percent between 1981 and 1987.[25]

What Did the Government Know or Do?

The Civil Aeronautics Board made its first major miscalculation by immediately relaxing all regulatory control rather than ensuring a gradual process to the market economy. This tended to throw the industry into chaos. In October, 1976, Merrell, Lynch, Pierce, Fenner and Smith supported a non-regulated, competitive industry. As related by CAB Chairman Robson in his testimony before Congress, MLPFS stated:

> "...the airline industry need not fear an easier entry policy provided the transitional phase is gradual, the entry and exit rules are predictable, and the carriers are efficient operators."[26]

Chairman Robson went on the say:

> "...the airline business is complex and... the existing carriers are experienced and skilled. They have demonstrated that they can tighten their belts and achieve greater efficiency when they have to. A more competitive environment should underscore these incentives."[27]

Further; Ms. Linda Kamm, General Counsel to the Department of Transportation stated during her testimony to Congress:

> "... We are supporting gradual change, change that will provide ample opportunity to protect against predatory conduct on the part of any carrier, that will protect service to small communities, and will recognize the investments made by the industry and its employees...."[28]

The CAB's immediate implementation of deregulation disregarded the testimony and forethought given implementation prior to passage of the act. A gradual implementation, easing the rush of smaller carriers to enter certain markets, could have given the industry sufficient competitive experience to head off some of the failures seen in the first two years. In that the airlines were seen to have skillful management, it should have been foreseen that fare-wars were a likely outcome in competitively heated markets. The predatory pricing that the CAB

testified could be avoided by gradual change, was brought on by the CAB's reversal of its thinking and undertaking an immediate relaxation of regulations. Civil Aeronautice Board Chairman Alfred E. Kahn testified at one point that:

> "...(it) would be absurd to expect businessmen all to rush to provide service without making their best possible estimates of how much capacity the several markets will support; that those estimates will typically be wildly off the mark; ...the amount of service they provide depends above all else on their individual estimates of what is profitable."[29]

This assumption proved wrong.

B. Efficiencies in Hub-and-Spoke Operations

In looking for ways to improve efficiency, the established airlines took advantage of the new entry and exit freedoms by restructuring their routes. They further developed and refined hub-and-spoke systems where all arrivals and departures funneled into and out of hub airports in large cities. Throughout a normal day, during periods lasting from thirty minutes to one hour, many of the airlines' fleet converge from various points where passengers and baggage transfer to other aircraft before they again take off. While the initial objective of the hub

systems was survival during the early turbulence of deregulation, the concept soon evolved into a highly effective operation that would eventually dominate the industry, create barriers to entry and reduce competition.

With this new flexibility, the airlines soon enjoyed the advantages of large-scale economies of scale and economies of scope.[30] Expensive labor, ground operations and equipment could be concentrated into fewer points while increasing utilization and spreading costs among more flights. And even more importantly, an airline could now serve many more city pairs through a hub, at higher frequencies, with fewer planes and crews. The major airlines all but abandoned point-to-point, nonstop flights in favor of highly concentrated hub-and-spoke connections. Thus, a hub which connected twenty cities to the east and twenty to the west, could now provide one stop service to 440 city-pairs. And with only one additional flight, 43 more markets would be added.[31]

Such large economies of scope and scale realized by the major carriers through their use of hub-and-spoke operations produced significant cost savings that were not available to the newly established, smaller airlines. The larger the airline's operation became, the more their average costs dropped, while their smaller competitors' costs remained relatively high. An economics textbook, Economics: Principles and Policy by Baumol

(who was first to formulate a general theory of contestability) and Binder, describes these effects by saying "...in the presence of strong economies of scale and economies of scope, society will not be able to preserve free competition, even if it wants to. The large, multi-product firm will have so great a cost advantage over its rivals that the small firms will be unable to survive."[32] Today, over two-thirds of city-pair markets are airline monopolies and 20 percent are duopolies.[33] Economists Bailey and Panzer have concluded that "Economies of scale, therefore, explain the existence of more monopoly city-pair markets than competitive markets in the U.S."[34]

The higher levels of concentration at the hubs created other competitive advantages. The smaller regional and commuter carriers have had to adjust their schedules to conform with the hub operators. Evidence shows that the dominant airline at an airport attracts a disproportionate share of the traffic, making a small scale entry into a market even more difficult.[35]

Though they have been enormously effective for the airlines, these "hub-and-chokes" have their detractors. Hubs have resulted in more take offs and landings, more miles flown over less direct routes, increased fuel consumption, elevated levels of congestion in the airways and terminals (particularly during peak periods in the day), and lengthened passengers' travel time. But airlines have become increasingly entrenched in these fortress hubs, and

adept at keeping rivals out.[36]

What Did the Government Know or Do?

Testimony by Chairman Robson, early on in the deliberations, recognized the need for hub points to accommodate smaller communities' service by commuter airlines feeding to larger carriers at larger airports.[37] In some respects, what changed was the definition of small communities. What was once medium-sized markets, became increasingly "smaller" markets serviced by major carriers as spokes in their system.

The main failure was the absolute confidence expressed by the political economists - especially Chairman Kahn - that the airline industry would behave as a competitive industry and did not seem to have characteristics to create enormous economies of scale.[38] Although used by European airlines for international travel, the huge efficiencies realized by the hub-and-spoke system were never really considered in any detail by the government economists. In effect, the major airlines took on many characteristics of commuter airlines feeding to the hub. Smaller aircraft, fewer maintenance centers and other streamlining efficiencies enabled considerable savings. The ingenuity of airline management was recognized, but underestimated.

Repeated testimony reiterated that small and large airlines faced the same cost lines and that market entry was, relatively, not exceptionally expensive. The incorrect assumption was that long distance city-pair service would continue as before and that competition (or the threat of competition) would be for those specific city-pairs. The hub-and-spoke system substantially reduced the number of long distance city-pairs and therefore reduced costs for the larger airlines.

C. <u>Barriers to Entry</u>

Deregulation was intended to remove barriers to entry, thus allowing a natural competitive environment to occur. But in reality, contestable markets have not developed because of the unanticipated strategic adjustments made by the major carriers. To the contrary, numerous competitive barriers to entry have evolved; controlled slots and gates at the busiest airports, the dominance of computerized reservation systems, frequent flyer programs, and the growing impact of travel agent ticket sales.

Limited access to gates and slots

Increased market access has not materialized under deregulation. Arrival and departure times are limited at the most saturated airports, effectively preventing new and smaller carriers from buying their way into a potentially profitable

market. Landing and takeoff rights, called slots, are constrained because of congestion and noise problems. At four of the busiest airports (Chicago's O'Hare, Washington National, and New York's Kennedy and La Guardia), slots were originally distributed in 1969. But because of mergers and the freedom to sell slots to the highest bidders, the industry's eight remaining major carriers now control 95 percent of the slots. Airlines may buy slots from another carrier but they don't come cheap. A prime arrival and departure slot at O'Hare may cost up to $5 million or more.[39] And so, while an established airline uses these slots for free, a new entrant must borrow heavily just to find a time and place to takeoff and land. Between 1987 and 1989, only 17 of 3,184 domestic slots became available to new or small airlines.[40]

Airlines that dominate a single airport have much to say about terminal construction and space allocation. To run an efficient hub, an airline needs a lot of an airport's resources; contiguous gates, ticketing counters, baggage handling equipment and repair facilities. Airport authorities have, in effect, given the dominate carrier serving their facility, veto power over new projects. This enables the airlines to limit their risk to over-expansion, which in turn, serves to protect local monopolies.[41] And so, while the skies are becoming more congested, so too are the airports. Having landing and takeoff rights are just not enough. Airlines must rely on terminal gates

and jetways which have become precious assets at many of the nation's busiest airports. It is not uncommon for local airport authorities to provide long-term contracts to their biggest carrier, lasting 20 to 40 years in some cases. This can all but shut down the expansion plans of a competitor.

Airline computerized reservation systems

Like the hub-and-spoke operation, the computerized reservation systems have introduced huge efficiencies into the business. Today, it is generally agreed they are indispensable given the complexity of post-deregulation fares and structures. American Airlines and United Airlines are the dominant leaders in this field where between 70 percent and 80 percent of all airline reservations are made using their system. Studies have shown that they enjoy a significant market share and economic advantage due to their ownership of a reservation system.[42] These systems, with their huge volumes of data, provide practically instantaneous market information, allowing carriers to adjust and discount their seats to maximum benefit, something that a newer and smaller carrier cannot do. Airline seats after all, are perishable goods that if left empty, have no value. And so, the pricing advantages obtained by a low-cost start-up carrier are lost to the larger carrier who can identify unsold seats and offer them at deeply discounted rates.

Using these so-called yield management systems, the airlines were quick to take advantage of the elasticity in the market, maximizing profits on non-discretionary (business) travellers and filling discounted seats with discretionary (pleasure) travellers.

Further, computerized reservation systems enable airlines to more easily identify those non-profitable routes which can then be subsidized by excess profits from less competitive markets. This is a practice fully accepted under economic regulation and carried over today.

With such a dominance in computerized reservation system, American and United appear to have taken advantage of their position by establishing uniformly high booking fees (amounts paid by other airlines for having their flights booked on a system). The GAO reported that they have increased their fees by up to 500 percent. In yet another example where the few major carriers have restrained competition, those airlines that failed to invest in developing their own reservation systems now find themselves paying discriminatory high booking fees to vendors with systems.[43] It is little surprise, then, that no major airline that does not own a significant portion in a computerized reservation system is doing well today.[44]

Frequent flyer programs

Yet another highly effective development has been introduced by the major carriers following deregulation to thwart new entry competition. The frequent flyer programs, first introduced by American Airlines in 1981, fostered brand loyalty in an industry where the service offered by competitors was believed to be nearly identical. Continued loyalty, especially in the most lucrative portion of the airline market, the full-fare business traveller, to a larger carrier who offers a greater opportunity to both earn and use mileage credits to practically anywhere in the world is achieved at the expense of smaller rivals. Called "legalized kickbacks" by some, these programs are too costly for a new airline that possesses neither the route structure, marketing clout, nor automated capability to offer a frequent flyer program.[45]

Travel agent sales

Immediately following deregulation, the method of selling a complex variety of tickets in a highly competitive environment took on increased importance. The computer reservation system has had a major impact, proliferating among travel agencies and again, with respect to the airlines, offering huge economies of scale and scope. All of the reservation systems provide generally the same flight and fare information, but it is usually

less complicated and quicker to block seats with the airline that owns the system. By 1988, the two largest carriers' reservation systems (American and United) controlled 70 percent of the travel agency bookings.[46] Agents who use an airline's system provide them additional bookings and revenue. Travel agents generally have more confidence in the accuracy and timeliness of seat availability information on the vendor airline, which results in more bookings. Agents find it easier and quicker to process reservations, tickets, boarding passes and seat assignments. Studies show there is a strong association between agents' bookings made on the vendor airline.[47]

It is an industry practice to pay agents extra commissions or "overrides" for the business steered their way. Based on volume, bonuses are paid as incentives for agents to book as many tickets as possible with a specific carrier. It is understandable then, that with travel agents booking about 80 percent of all domestic tickets (up from 50 percent prior to deregulation), they appear to be working first for a select few airlines, followed by passengers a distant second.[48]

What Did the Government Know or Do?

Barriers to entry were intended to be few - an airline must only show it is capable of providing the public service. Competitive barriers were expected to be no greater than in other

U.S. industries. The unexpected ingenuity of the airlines to thwart competition, again, was not foreseen. Improving computer technologies have also helped create a competitive edge for the major carriers.

Dominance at hub airports by a major carrier can approach local monopolistic proportions. Such long-term contractual agreements between airport authorities and hub carriers was not predicted. Government actions (or non-action) to determine anti-trust violations have not occurred. Smaller carriers are generally free to enter any market, however, arrival and departure slots are not available during the peak (read profitable) periods dominated by the major carriers at that particular hub.

Computerized reservations systems were foreseen, but only to the extent to ensure that connecting flights (even by competing airlines) were properly, fairly and economically ticketed. Technology, which then was not widespread, now enables an airline to instantaneously manipulate seat rates. With few exceptions, government anti-trust actions have not been taken to reduce this awesome advantage over smaller airlines.

Frequent flyer programs and travel agent incentives were not foreseen, but are not unusual techniques for industry. Incentive programs to customers and retailers are common in many U.S.

industries, and are simply prudent marketing decisions not anticipated by the government.

D. Increased Mergers and Acquisitions

Facing exceedingly tough competition from a multitude of new, low-cost airlines, the major carriers were forced to engage in destructive fare wars while looking to cut costs and increase productivity. Through trial and error, they created innovations which capitalized on economies of scale and economies of scope. They quickly erected barriers to entry, effectively stifling competition from small airlines trying to gain a foothold, in effect, preventing the existence of contestable markets.

The intense competition with reduced yields, combined with over expansion and heavy debt put the industry in a precarious position. This has resulted in over 150 bankruptcies and 50 mergers from 1978 to 1988.[49] Other long term effects may be less apparent. With reduced profit margins of just one percent through the 1980s (compared to five percent average profit margin for other sectors of American industry), all but a few of the airlines have been crippled, sapping them of the financial resources needed to attract investment and meet capital needs for the 1990s.[50]

In a sense, what began as a Darwinian trend toward

consolidation, where the dominant, stronger firms prevail, has become a feeding frenzy with the major carriers grabbing profitable international routes, aircraft, airport gates and slots from the financially crippled airlines. By approving every merger and acquisition, the government exacerbated the competitive, impenetrable barriers to entry.

For new or heavily indebted carriers to effectively enter and compete in an established market, they must likely increase the scale of their operation and capture economies of scale and scope. But in doing so, they raise the sunk costs required to break into a market, incur further debts and risk, all of which over time, lessens the contestability of the market.[51] Capital provides opportunities for competition, but without access to new money, airlines have no future. Recently, the massive acquisitions by the top three carriers (United, American and Delta) of international routes previously served by Trans World Airlines and Pan Am have given them self-reinforcing marketing power that can only grow over time. And because new entry into the airline business is highly unlikely, it doesn't appear that the number of national carriers will increase. "When you get three big carriers all at about the same state of the art," states a respected airline consultant, "they begin to move in concert."[52] These three, predict many analysts, will be the controlling airlines in the domestic market for years to come.

What Did the Government Know or Do?

From the first the CAB expected some carriers to fail and larger, stronger airlines to acquire their assets. In 1977, Chairman Robson stated in his testimony:

> "...in the past, there have been a number of carriers which teetered on the brink of bankruptcy and were salvaged only by merger with another airline. None of the regulatory reform proposals would preclude the merger route in similar future circumstances."[53]

Linda Kamm, serving as General Counsel for the Department of Transportation, stated in testimony:

> "...Many of the carriers, especially the local service carriers, have argued that under the free-for-all of deregulation, the big carriers would swallow up the smaller ones, resulting in less competition and higher fares."

She continued:

> "This argument seems to recognize the link between competition and lower fares, but that is about all of the argument that we believe is correct. The airline industry is not an industry with any natural tendency toward

monopoly... Larger carriers do not have insurmountable advantages over small competitors."[54]

The CAB and DOT retained this vision of the industry through the numerous mergers and acquisitions mentioned. While the government expected there would be a tendency for some airlines to merge, it was not anticipated that all mergers would be approved, practically without question or regard for future consequences. Only after the oligopoly was formed did the political economists realize the industry had a tendency toward oligopoly.

IV. CONCLUSIONS

A. Industry Prerogatives

Why were many of the essential presumptions of the supporters of deregulation faulty? As shown throughout this paper, there is no one cause or explanation, especially when the issue is complicated by so many political and economic factors along with the linkages that connect the market characteristics and industry reactions. And there remains widely dissenting views from economists, politicians and airline representatives on whether deregulation has been a success or failure.

Expecting more reliance on market forces and competition,

Congress and economists have acknowledged that they did not anticipate the explosion of new carriers, fare wars, bankruptcies, acquisitions and most significantly, industry's rapid and massive strategic restructuring following deregulation. The government attempted to shape market characteristics through a laissez-faire, quick abolition of regulation without fully considering management prerogatives and the effects that their actions would have on a deregulated industry.

A former Washington deregulator recalled the assumptions behind airline deregulation. He summarizes the government's miscalculations by saying "...the bureaucrats in Washington could not figure out what airline consumers want[ed] as well as real-world airline managers could."[55] This view reinforces the notion that the industry executives, in seeking survival and profitability, responded to competition and market exigencies in ways that were totally unforeseen. It is perhaps an indictment against our political system that entrenched lawmakers have become, seemingly, naive and insulated from the realities of American industry and its capacity for survival. Clearly, given all of the hearings and testimony before Congress by industry experts, many of industry's management and marketing actions should have been predictable.

B. Economies of scale and scope.

Deregulation supporters believed the airlines lacked economies of scale and scope and that they were not natural monopolies. In markets with unrestricted freedom of entry, they believed that a smaller, low-cost airline could operate as efficiently as a large one. However, economies of scale and scope were realized with the emergence of large carrier hub-and-spoke systems, frequent flyer programs, increasing importance of travel agents and incentive programs and computer reservation systems. A well structured, bigger operation is more economically efficient and, therefore, naturally maintains an advantage over a smaller competitor. The airline industry does, in fact, possess very significant economies of scale and scope, something that all successful airline executives know. Yet the deregulation proponents were surprised and underestimated the competitive advantages realized through hub-and-spoke operations.[56]

C. Contestable markets and barriers to entry.

Deregulation was expected to produce public benefits because economists believed the industry was comprised of perfectly contestable markets.[57] With unrestricted entry and exit, and the high mobility of airline capital equipment, it was assumed there would be no barriers to entry or restraints to trade. And

so, if an airline adopted monopolistic practices in certain regions, it would not take long before a new entrant would be attracted to that market, raising the level of competition and forcing prices down. But they underestimated the ingenuity of American businessmen. The successful airlines adopted strategies to preclude perfectly contestable markets. Their strategies were not tied to traditional industry practices, rather, they deviated from these practices to exploit the underlying market features.[58] Today, many free-market economists have changed their position, acknowledging that they were totally naive about market contestability and freedom of entry; the industry has not been frictionless.[59]

But while many airlines have indeed attempted to enter the market, few have been able to last. Barriers to entry do exist and they are significant. The absolute control and limited availability of gates and slots, the domination by the few computerized passenger reservation systems, the loyalty induced frequent flyer programs and increased reliance on travel agencies and the incentive payments to them have given the established, major airlines tremendous advantages over their smaller, less profitable competitors. The proponents of deregulation did not anticipate these innovations, much less their effects on the market and industry.

Alfred Kahn, the patriarch of airline deregulation, saw new

start-up airlines as the best way to keep the major airlines competitive. But he later admitted that "Nobody recognized all the ways in which a carrier could insulate itself from competition."[60]

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